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VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998			KIM, PAUL	
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SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/603,987	OKUMURA ET AL.
	Examiner Paul Kim	Art Unit 2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 October 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/26/03.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

1. This Office action is responsive to the following communication: Election filed on 2 October 2006.
2. Claims 1-12 are pending and present for examination. Claims 1, 8, 9, 11 and 12 are independent.

Election/Restrictions

3. Applicant's election of claims 1-12 in the reply filed on 2 October 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

5. The information disclosure statement (IDS) submitted on 26 June 2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

6. The abstract of the disclosure is objected to because of undue length (i.e. exceeds 150 words). Correction is required. See MPEP § 608.01(b).

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Claim Objections

7. **Claims 1 and 8** are objected to because of the following informalities: lines 18 and 17 of the respective claims recite the following typographical "said structure document." It is assumed for the purposes of this examination that the intended language for the limitations of the claim are "said structured document." Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
9. **Claim 6** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - a. Lines 3 and 4 of claim 6 recite a "converted date." It is unclear and indefinite what is being specifically claimed through the recitation of a "converted date." For, the purposes of this examination, a "converted date" will be interpreted as "converted date information."

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
11. **Claims 1-12** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
 - a. **Claims 1-7 and 9-12** are non-statutory because the language of the claims is directed toward "an information processing apparatus," representing functional descriptive material without producing a "concrete, useful, and tangible result" to form the basis of statutory subject matter under 35 U.S.C. 101.

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Additionally, the claims are non-statutory because upon the determination of the key region from the plurality of regions, the claimed invention fails to utilize the key region in the furtherance of a potential “concrete, useful, and tangible result” to form the basis of statutory subject matter under 35 U.S.C. 101.

b. **Claim 8** is non-statutory because the language of the claim raises a question as to whether the claim is directed merely to an abstract idea which would result in a practical application producing a “concrete, useful, and tangible result” to form the basis of statutory subject matter under 35 U.S.C. 101. The claim makes no mention of a tangible medium wherein existing code may be processed to perform the recited steps in the claims. See State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. MPEP 2106. “The claimed invention as a whole must accomplish a practical application. That is, it must produce a ‘useful, concrete and tangible result’ ” (emphasis added).

Additionally, the claims are non-statutory because upon the determination of the key region from the plurality of regions, the claimed invention fails to utilize the key region in the furtherance of a potential “concrete, useful, and tangible result” to form the basis of statutory subject matter under 35 U.S.C. 101.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. **Claims 1, 4-5, and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Freivald (U.S. Patent No. 6,012,087, hereinafter referred to as FREIVALD '087), filed on 20 May 1998, and issued

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on 4 January 2000, in view of Sumita et al (U.S. Patent No. 6,092,191, hereinafter referred to as SUMITA), filed on 12 September 1997, and issued on 18 July 2000.

14. **As per independent claims 1 and 8,** FREIVALD '087, in combination with SUMITA, discloses:

An information processing apparatus (and method) for determining a key region from a structured document including a plurality of regions, the apparatus comprising:

- a read section acquiring contents or management information of the regions included in said structured document at time series for a plurality of number of times {See FREIVALD, C4:L18-21, wherein this reads over "[a] database is coupled to the responder. It receives the URL from the responder when the web page is registered by the remote client"};
- a storage section storing the contents or management information of the regions acquired by the read section {See FREIVALD '087, C4:L22-24, wherein this reads over "[a] history table in each of the records in the database stores a most-recent signature and a plurality of older-version signatures for a registered web page identified by the URL"};
- a comparison and check section comparing the contents or management information of the corresponding regions among the contents or management information of the regions acquired by the read section, and checking whether each of the regions has been updated based on a comparison result {See FREIVALD '087, C6:L26-34, wherein this reads over "the invention archives a checksum CRC or signature of the source files" and "[c]omparison is made of the stored or archived signature of the document and a fresh signature of the currently-available document"};
- an update frequency calculation section calculating update frequency information for each of the regions based on a history of a check result of the comparison and check section {See FREIVALD '087, C4:L28-39, wherein this reads over "[a] periodic minder is coupled to the database and the network connection. It periodically re-fetches the web page from the remote web-page server" and "[t]he periodic minder notifies the remote client of a unique change when the new signature does not match the most-recent signature and does not match any of the older-version signatures in the record"}; and
- a key region determination section determining the key region from the plurality of regions included in said structure document based on the update frequency information {See SUMITA, C29:L17-35, wherein this reads over "an updated time of a monitored document is obtained (step 181) and a time with the highest frequency is assumed an updated predicted time based on the updated time obtained and historical update time data which have been accumulated"}.

While FREIVALD '087 fails to expressly disclose a method wherein a key region determination section determines the key region based on the update frequency information, SUMITA discloses a method wherein a time with the highest frequency is assumed an update predicted time. That is, the update time of the regions is predicted by applying the time with the highest frequency. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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combine the inventions disclosed by FREIVALD '087 and SUMITA to modify the claimed invention such that the key region may be deterministic in the frequency of the updates for the structured document.

One of ordinary skill in the art would have been motivated to do this modification so that the region with the highest degree of frequency (i.e. the key region), may set the rate at which an update is checked for.

15. **As per dependent claim 4,** FREIVALD '087, in combination with SUMITA, discloses:

The information processing apparatus according to claim 1, wherein said comparison and check section compares the content of one of the regions acquired by said read section at one reading time with the content of said one region acquired at a different reading time, and thereby checks whether said one region has been updated {See FREIVALD '087, C6:L26-34, wherein this reads over "the invention archives a checksum CRC or signature of the source files" and "[c]omparison is made of the stored or archived signature of the document and a fresh signature of the currently-available document"}.

16. **As per dependent claim 5,** FREIVALD '087, in combination with SUMITA, discloses:

The information processing apparatus according to claim 1, wherein said comparison and check section compares the management information of one of the regions acquired by said read section at one reading time with the management information of said one region acquired at a different reading time, and thereby checks whether said one region has been updated {See FREIVALD '087, C6:L26-34, wherein this reads over "the invention archives a checksum CRC or signature of the source files" and "[c]omparison is made of the stored or archived signature of the document and a fresh signature of the currently-available document"}.

17. **Claims 6-7** is rejected under 35 U.S.C. 103(a) as being unpatentable over FREIVALD '087, in view of SUMITA, and in further view of Official Notice.

18. **As per dependent claim 6,** the Examiner takes Official notice that it would have been well-known to one of ordinary skill in the art at the time the invention was made to convert the contents or management information of the regions into converted data information since the converted data information would have been applied to the frequency of the updates and to see whether an update was the most current one.

19. **As per dependent claim 7,** the Examiner takes Official notice that it would have been well-known to one of ordinary skill in the art at the time the invention was made to calculate the frequency of update by the previous frequency information. That is, it would have been obvious that in order to

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calculate the new frequency, a mathematical average must be applied to the previous frequency, derived from the regions update history, and to the current time of update.

20. **Claims 2-3, 9 and 11-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over FREIVALD '087, in view of SUMITA, and in further view of Freivald et al (U.S. Patent No. 5,898,836, hereinafter referred to as FREIVALD '836), filed on 14 January 1997, and issued on 27 April 1999.

21. **As per dependent claim 2,** FREIVALD '087, in combination with SUMITA and FREIVALD '836, discloses:

The information processing apparatus according to claim 1, comprising a boundary division section dividing the respective regions included in said structured document based on boundary information on boundaries among the regions displayed on a screen {See FREIVALD '836, C9:L31-58 , wherein this reads over "HTML tags are inserted into the document for hyperlinks, formatting and layout. HTML tags are inserted before every paragraph, subheading, image, or hyper-link. Thus HTML documents are divided into sections by the HTML tags" },

wherein said read section reads the contents or management information of said respective regions by cooperating with the boundary division section {See FREIVALD '836, C9:L31-58, "each section in an HTML document can be separately checksummed and CRC's for each section can be archived instead of one CRC for the entire document"}.

While FRIEVALD '087 fails to expressly disclose a method wherein a division section divides the structured document into regions, FREIVALD '836 discloses a method wherein each section of a document can be separately checksummed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and FREIVALD '836 to modify the claimed invention such that an update frequency may be provided for each region. Furthermore, as both disclosed inventions are directed to the monitoring and detection of updates in a document, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and FREIVALD '836.

One of ordinary skill in the art would have been motivated to do these modifications so that the region with the highest degree of frequency (i.e. the key region), may set the rate at which an update is checked for.

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22. **As per dependent claim 3**, FREIVALD '087, in combination with SUMITA and FREIVALD '836, discloses:

The information processing apparatus according to claim 1, comprising a region management section discriminating the respective regions using an inter-region structure if the inter-region structure showing a logic structure between the regions is defined for each of the regions included in said structured document {See FREIVALD '836, C9:L31-58 , wherein this reads over "HTML tags are inserted into the document for hyperlinks, formatting and layout. HTML tags are inserted before every paragraph, subheading, image, or hyper-link. Thus HTML documents are divided into sections by the HTML tags" },

wherein said read section reads the contents or management information of said respective regions by cooperating with the region management section {See FREIVALD '836, C9:L31-58, "each section in an HTML document can be separately checksummed and CRC's for each section can be archived instead of one CRC for the entire document" }.

23. **As per independent claim 9**, FREIVALD '087, in combination with SUMITA and FREIVALD '836, discloses:

An information processing apparatus for determining a key region from a structured document, the apparatus comprising:

- a read section acquiring said structured document regularly or irregularly {See FREIVALD, C4:L18-21, wherein this reads over "[a] database is coupled to the responder. It receives the URL from the responder when the web page is registered by the remote client" };
- a division section dividing the structured document acquired by the read section into one or a plurality of regions {See FREIVALD '836, C9:L31-58, wherein this reads over "each section in an HTML document can be separately checksummed and CRC's for each section can be archived instead of one CRC for the entire document" };
- a division result storage section temporarily storing a division result of the division section {See FREIVALD '836, C9:L31-58, wherein this reads over "each section in an HTML document can be separately checksummed and CRC's for each section can be archived instead of one CRC for the entire document" };
- a comparison section comparing a content of said structured document acquired by said read section at one reading time with the content of said structured document acquired at a different reading time for each of said regions, and thereby checking whether each of the regions has been updated {See FREIVALD '087, C6:L26-34, wherein this reads over "the invention archives a checksum CRC or signature of the source files" and "[c]omparison is made of the stored or archived signature of the document and a fresh signature of the currently-available document" };
- an update frequency storage section storing update information for each of the regions {See FREIVALD '087, C4:L28-39, wherein this reads over "[a] periodic minder is coupled to the database and the network connection. It periodically re-fetches the web page from the remote web-page server" and "[t]he periodic minder notifies the remote client of a unique change when the new signature does not match the most-recent signature and does not match any o the older-version signatures in the record" };

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- an update frequency calculation section calculating a new update frequency {See SUMITA, C29:L17-35, wherein this reads over "an updated time of a monitored document is obtained (step 181) and a time with the highest frequency is assumed an updated predicted time based on the updated time obtained and historical update time data which have been accumulated"} for each of the regions based on a previous update frequency of the each region and newly acquired information on update of said each region {See FREIVALD '087, C4:L28-39, wherein this reads over "[a] periodic minder is coupled to the database and the network connection. It periodically re-fetches the web page from the remote web-page server" and "[t]he periodic minder notifies the remote client of a unique change when the new signature does not match the most-recent signature and does not match any o the older-version signatures in the record"}; and
- a determination section determining that the region having a highest update frequency as the key region {See SUMITA, C29:L17-35, wherein this reads over "an updated time of a monitored document is obtained (step 181) and a time with the highest frequency is assumed an updated predicted time based on the updated time obtained and historical update time data which have been accumulated"}.

While FRIEVALD '087 fails to expressly disclose a method wherein a division section divides the structured document into regions, FREIVALD '836 discloses a method wherein each section of a document can be separately checksummed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and FREIVALD '836 to modify the claimed invention such that an update frequency may be provided for each region. Furthermore, as both disclosed inventions are directed to the monitoring and detection of updates in a document, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and FREIVALD '836.

Additionally, while FREIVALD '087 fails to expressly disclose a method wherein a key region determination section determines the key region based on the update frequency information, SUMITA discloses a method wherein a time with the highest frequency is assumed an update predicted time. That is, the update time of the regions is predicted by applying the time with the highest frequency. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and SUMITA to modify the claimed invention such that the key region may be deterministic in the frequency of the updates for the structured document. Furthermore, as both disclosed inventions are directed to the monitoring and detection of updates in a document, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and SUMITA.

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One of ordinary skill in the art would have been motivated to do these modifications so that the region with the highest degree of frequency (i.e. the key region), may set the rate at which an update is checked for.

24. **As per independent claim 11**, FREIVALD '087, in combination with SUMITA and FREIVALD '836, discloses:

An information processing apparatus for determining a key region from a structured document, the apparatus comprising:

- a read section acquiring said structured document regularly or irregularly {See FREIVALD '087, C4:L18-21, wherein this reads over "[a] database is coupled to the responder. It receives the URL from the responder when the web page is registered by the remote client"};
- a division section dividing the structured document acquired by the read section into one or a plurality of regions {See FREIVALD '836, C9:L31-58, wherein this reads over "each section in an HTML document can be separately checksummed and CRC's for each section can be archived instead of one CRC for the entire document"};
- a storage section temporarily storing a read result of the read section {See FREIVALD, C4:L22-24 '087, wherein this reads over "[a] history table in each o the records in the database stores a most-recent signature and a plurality of older-version signatures for a registered web page identified by the URL"};
- a comparison section comparing a content of said structured document acquired by said read section at one reading time with the content of said structured document acquired at a different reading time for each of said regions, and thereby checking whether each of the regions has been updated {See FREIVALD '087, C6:L26-34, wherein this reads over "the invention archives a checksum CRC or signature of the source files" and "[c]omparison is made of the stored or archived signature of the document and a fresh signature of the currently-available document"};
- an update information storage section storing update information for each of the regions {See FREIVALD '087, C4:L28-39, wherein this reads over "[a] periodic minder is coupled to the database and the network connection. It periodically re-fetches the web page from the remote web-page server" and "[t]he periodic minder notifies the remote client of a unique change when the new signature does not match the most-recent signature and does not match any o the older-version signatures in the record"};
- an update frequency calculation section calculating a new update frequency {See SUMITA, C29:L17-35, wherein this reads over "an updated time of a monitored document is obtained (step 181) and a time with the highest frequency is assumed an updated predicted time based on the updated time obtained and historical update time data which have been accumulated"}, for each of the regions based on a previous update frequency of the each region and newly acquired information on update of said each region {See FREIVALD '087, C4:L28-39, wherein this reads over "[a] periodic minder is coupled to the database and the network connection. It periodically re-fetches the web page from the remote web-page server" and "[t]he periodic minder notifies the remote client of a unique change when the new signature does not match the most-recent signature and does not match any o the older-version signatures in the record"}; and

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- a determination section determining that the region having a highest update frequency as the key region {See SUMITA, C29:L17-35, wherein this reads over "an updated time of a monitored document is obtained (step 181) and a time with the highest frequency is assumed an updated predicted time based on the updated time obtained and historical update time data which have been accumulated"}.

While FRIEVALD '087 fails to expressly disclose a method wherein a division section divides the structured document into regions, FREIVALD '836 discloses a method wherein each section of a document can be separately checksummed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and FREIVALD '836 to modify the claimed invention such that an update frequency may be provided for each region. Furthermore, as both disclosed inventions are directed to the monitoring and detection of updates in a document, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and FREIVALD '836.

Additionally, while FREIVALD '087 fails to expressly disclose a method wherein a key region determination section determines the key region based on the update frequency information, SUMITA discloses a method wherein a time with the highest frequency is assumed an update predicted time. That is, the update time of the regions is predicted by applying the time with the highest frequency. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and SUMITA to modify the claimed invention such that the key region may be deterministic in the frequency of the updates for the structured document. Furthermore, as both disclosed inventions are directed to the monitoring and detection of updates in a document, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and SUMITA.

One of ordinary skill in the art would have been motivated to do these modifications so that the region with the highest degree of frequency (i.e. the key region), may set the rate at which an update is checked for.

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25. **As per independent claim 12, FREIVALD '087, in combination with SUMITA and FREIVALD '836, discloses:**

An information processing apparatus for determining a key region from a structured document, the apparatus comprising:

- a read section acquiring said structured document regularly or irregularly {See FREIVALD '087, C4:L18-21, wherein this reads over "[a] database is coupled to the responder. It receives the URL from the responder when the web page is registered by the remote client"};
- a division section dividing the structured document acquired by the read section into one or a plurality of regions {See FREIVALD '836, C9:L31-58, wherein this reads over "each section in an HTML document can be separately checksummed and CRC's for each section can be archived instead of one CRC for the entire document"};
- a conversion section converting a content of each of said divided regions into converted data {See FREIVALD '836, C9:L31-58, wherein this reads over "each section in an HTML document can be separately checksummed and CRC's for each section can be archived instead of one CRC for the entire document"};
- a storage section temporarily storing the converted data {See FREIVALD '836, C9:L31-58, wherein this reads over "each section in an HTML document can be separately checksummed and CRC's for each section can be archived instead of one CRC for the entire document"};
- a comparison section comparing the converted data obtained from said structured document that is acquired by said read section at one reading time with the converted data obtained from said structured document that is acquired at a different reading time, and thereby checking whether each of the regions has been updated {See FREIVALD '087, C6:L26-34, wherein this reads over "the invention archives a checksum CRC or signature of the source files" and "[c]omparison is made of the stored or archived signature of the document and a fresh signature of the currently-available document"};
- an update information storage section storing update information for each of the regions {See FREIVALD, C4:L28-39 '087, wherein this reads over "[a] periodic minder is coupled to the database and the network connection. It periodically re-fetches the web page from the remote web-page server" and "[t]he periodic minder notifies the remote client of a unique change when the new signature does not match the most-recent signature and does not match any o the older-version signatures in the record"};
- an update frequency calculation section calculating a new update frequency {See SUMITA, C29:L17-35, wherein this reads over "an updated time of a monitored document is obtained (step 181) and a time with the highest frequency is assumed an updated predicted time based on the updated time obtained and historical update time data which have been accumulated"} for each of the regions based on a previous update frequency of the each region and newly acquired information on update of said each region {See FREIVALD '087, C4:L28-39, wherein this reads over "[a] periodic minder is coupled to the database and the network connection. It periodically re-fetches the web page from the remote web-page server" and "[t]he periodic minder notifies the remote client of a unique change when the new signature does not match the most-recent signature and does not match any o the older-version signatures in the record"}; and
- a determination section determining that the region having a highest update frequency as the key region {See SUMITA, C29:L17-35, wherein this reads over "an updated

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time of a monitored document is obtained (step 181) and a time with the highest frequency is assumed an updated predicted time based on the updated time obtained and historical update time data which have been accumulated"}.

While FRIEVALD '087 fails to expressly disclose a method wherein a division section divides the structured document into regions, FREIVALD '836 discloses a method wherein each section of a document can be separately checksummed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and FREIVALD '836 to modify the claimed invention such that an update frequency may be provided for each region. Furthermore, as both disclosed inventions are directed to the monitoring and detection of updates in a document, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and FREIVALD '836.

Additionally, while FREIVALD '087 fails to expressly disclose a method wherein a key region determination section determines the key region based on the update frequency information, SUMITA discloses a method wherein a time with the highest frequency is assumed an update predicted time. That is, the update time of the regions is predicted by applying the time with the highest frequency. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and SUMITA to modify the claimed invention such that the key region may be deterministic in the frequency of the updates for the structured document. Furthermore, as both disclosed inventions are directed to the monitoring and detection of updates in a document, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions disclosed by FREIVALD '087 and SUMITA. One of ordinary skill in the art would have been motivated to do these modifications so that the region with the highest degree of frequency (i.e. the key region), may set the rate at which an update is checked for.

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26. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over FREIVALD '087, in view of SUMITA, in further view of FREIVALD '836, and in further view of Official Notice.

27. **As per dependent claim 10,** the Examiner takes Official notice that it would have been well-known to one of ordinary skill in the art at the time the invention was made to calculate the frequency of update by using an exponential average. That is, it would have been obvious that in order to calculate the new frequency, a mathematical average must be applied to the previous frequency, derived from the regions update history, and to the current time of update.

Conclusion

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is (571) 272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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TECH Center 2100



SAM RIMELL
PRIMARY EXAMINER